TDI | Texas Department of Insurance

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# Product Evaluation

LVR20 | 0219

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

**Evaluation ID:** LVR-20

**Effective Date:** February 1, 2019
**Re-evaluation Date:** February 2023

**Product Name:** Model DC-6174 Aluminum Louvers, Impact Resistant

**Manufacturer:** Construction Specialties, Inc.
49 Meeker Avenue
Cranford, NJ 07016
Phone: (800) 526-6930

**General Description:**
Model DC-6174 is a 6" hurricane impact resistant mullion louver. Heads, sills, jambs and mullions to be one-piece structural aluminum members with integral caulking slot and retaining beads. Mullions must be sliding interlock with internal drains. Blades to be one-piece aluminum extrusions with gutters designed to catch and direct water to jamb and mullion drains. Compression gaskets must be provided between bottom of mullion or jamb and top of sill to insure leak tight connections. Material minimum thickness to be as follows: Heads: 0.081" (2.06mm), Sills and Fixed Blades: 0.081" (2.06mm), Jambs and Mullions: 0.081"

**Design Drawings:**
The Construction Specialists, Inc. drawing, developed by the CS Group, titled "DC-6174 Louver," drawing No. RD-363-1, RD-363-2, RD-363-3, RD-363-4, RD-363-5, RD-363-6, and RD-363-7, all dated January 27, 2006, all signed, sealed and dated January 03, 2019 by Gustave L. Schmoll, P.E. The stated drawings will be referred to as approved drawings in this report.

**Limitations:**

**Wall Construction:** The louvers may be mounted to the following types of wall framing:

- Metal studs (minimum 16 gauge, Fy = 50ksi)
- Concrete (minimum compressive strength 2,000 psi for jamb fasteners or 3,000 psi for mullions.
- Structural steel (minimum 1/4" thick, Fy = 36 ksi).
- Aluminum minimum 1/8" thick

These louvers have been designed and tested in accordance with TAS 201, TAS 202, and TAS 203.

It is the responsibility of the structural engineer of record to verify the capacity of the structure to support the loads imposed by the louvers and ensure the correct steel and concrete thickness.

All fasteners to be corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.

The louver is to be installed in a location where the room behind the louver is designed to drain water penetrating the room and the room will house water proof or water-resistant equipment, components or supplies.

Jamb clip spacing may not be altered. Each clip and fastener used must be detailed on the drawing.

The design of the louvers is in accordance to the following: ADM – Aluminum Design Manual.

Panel widths are as shown on RD-363-1 and the load tables. When installed in openings designed to withstand the loads imposed by the louvers, the height is unlimited, if there is no connection between the louver head and sill or stiffener to the structure.

When installed as mulled units, the mullion can be either hidden or visible. The mullion load tables control the distance between mullions and mullion heights.

Blades and mullions of this louver are designed as "Pin End" connected to the building structure. The structural engineer of record must design the building framing and its members accordingly.

**Maximum Width:** The maximum width of a louver panel unit is 10'-0". Louver panel units may be placed side by side utilizing mullions to achieve an unlimited overall width. Refer to Table 1 and the design drawings.

**Maximum Height:** The maximum height of a louver panel unit is 12'-0". Refer to Table 1. Louver panel units may be stacked to achieve an opening height. For such conditions, the maximum overall height is a function of design pressure, panel width, and mullion span. Refer to the approved drawings for the maximum allowable height.

**Table 1**

| Assembly | Maximum Single Section Width | Maximum Single Section Height | Allowable Design Pressure Rating |
|---|---|---|---|
| 1 | 4'-0" | 8'-2" | ±90.0 psf |
| 2 | 6'-0" | 8'-2" | ±120.0 psf |
| 3 | 10'-0" | 8'-2" | ±100.0 psf |
| 4 | 9'-0" | 12'-0" | ±170.0 psf |
| 5 | 9'-0" | 10'-0" | ±150.0 psf |
| 6 | 9'-0" | 9'-0" | ±113.0 psf |

**Installation:**
All requirements specified in the IRC and the IBC must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

**General:**
**Blade Support:** Refer to the design drawings for requirements on blade support.

**Product Identification:** Each unit must bear a permanent label containing the manufacturer's name, series number of louver, and applicable test standards.

**Impact Resistant:** These louver assemblies satisfy the TDI's criteria for protection from windborne debris in both the Inland I zone and the Seaward zone. The louver assemblies passed an impact standard equivalent to Missile Level D specified in ASTM E 1996-04. The louvers may be installed at any height on the structure if the design pressure rating for the assemblies is not exceeded. These louver assemblies will not need to be protected with an impact protective system.

**Acceptance of Smaller Assemblies:** Louver assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

**Anchorage Method:** The aluminum louvers must be installed in accordance with the approved drawings.

**Note:** Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.